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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,928	04/20/2004	Brian Coleman	58325-8001.US01	5104
22918	7590	02/07/2006	EXAMINER	
PERKINS COIE LLP P.O. BOX 2168 MENLO PARK, CA 94026			KIM, ELLEN E	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/828,928	<b>Applicant(s)</b> COLEMAN	
	<b>Examiner</b> Ellen Kim	<b>Art Unit</b> 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,6-9,11-15,22-27,37 and 42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6-9,11-15,22-27,37 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 6-9, 11-15, 22-27, 37, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goorjian [USPAT 5,963,683].**

In re claims 1, 6-9, 11-15, 22-27, 37, and 42, Goorjian et al disclose a multi-channel, optical switch 120 [fig. 2] comprising:

A waveguide 32;

A plurality of channels [any two channels of 34-43] extending from the waveguide , each channel of the plurality of channels to provide an optical path suitable for transmission of the light bullets [abstract] ;

and wherein a first subset of the light bullets are to propagate into a predetermined channel of the plurality of channels responsive to interaction with a second subset of the light bullets,

a plurality of light source channels [any plurality of channels can be used except for the use of the plurality of channels] extending from the waveguide 32.

Goorjian et al disclose every aspect of claimed invention except for the first and second material.

Goorjian et al teach at column 6, lines 38-44 that different material can be used, however, Goorjian et al do not teach that the waveguide is made of different material than that of the channels.

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify to include the waveguide made of different material than that of the channels since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Note that Goorjian et al teach at column 13, lines 1-9 that modification of composition, and alternative highly nonlinear material may be used.

Goorjian et al do not show the light source, however, it is clear Goorjian et al inherently show the sources next to the light source channels. Note that for the proper operation of the Goorjian et al device, the light source is a necessary element.

In re claim 6, Goorjian et al teach at abstract the light bullets are to co-propagate.

In re claim 7, any one of the plurality of channels can be function as an absorption layer.

In re claims 8, 9, 11, and 24, Goorjian et al teach at column 2, line 18 the controller which can process the commands for connections and send a control signal to operate the switch in the desired manner. Note that "may be" in the claim 8 does not further positively limit the claimed structural limitation.

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In re claim 12, Goorjian et al teach at column 2, line 8 the communication networks.

In re claim 13, Goorjian et al disclose every aspect of claimed invention except for the cable interface.

Official Notice is taken that cable interface coupled to an optical switch for the purpose of faster light transmission is old and well known in the art. See In Re Malcolm 1942 C.D. 589:543 O.G. 440 MPEP 706.02 (a).

Therefore, it would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Goorjian et al device to be coupled to a cable interface for the purpose of faster light transmission.

In re claims 14-15, 22, Goorjian et al teach at column 6, lines 38-44 that semiconductor material can be used.

In re claim 23, Goorjian et al teach at column 11, lines 23-28 that the waveguide is bulk material.

In re claim 25, Goorjian et al teach in abstract the negative group velocity material.

In re claims 26 and 27, the corresponding method steps are inherently shown by the Goorjian et al device, and the detail of claim limitation are clearly discussed in above rejection.

In re claims 37 and 42, Goorjian et al disclose every aspect of claimed invention except for the plurality of optical switches.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an optical interface including plurality of optical switches, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

### ***Conclusion***

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349.

The examiner can normally be reached on Monday through Thursday.

Ellen E. Kim

Primary Examiner

February 6, 2006/EK

A handwritten signature in black ink, appearing to be 'E. Kim', written in a cursive style.